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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/815,942

Filing Date: April 02, 2004

Appellant(s): VAN ROSSUM ET AL.

John P Iwanicki
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 17, 2008 appealing from the Office action mailed March 18, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. The previous 35 U.S.C. 112, second paragraph, rejection of claims 29 and 41 have been withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

EP 0478067	van Rossum	4-1992
5,574,117	Yoshida	11-1996
4,409,266	Wieczorek	10-1983
JP 51127181	Sato	11-1976

English Translation of JP 51127181, pages 1-12

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The previous rejection of claims 29 and 41 35 U.S.C. 112, second paragraph have been withdrawn.

Claim Rejections - 35 USC § 103

Claims 29-37 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Rossum et al. (EP 0478067, hereinafter EP-067), and in view of Yoshida et al. (U.S. Patent 5,574,117, hereinafter ‘117).

Claims 29-37 and 39-41: EP-067 teaches a removable protective coating [it is inherent that the coating is adhered to outer surface otherwise it would not need to be removed] on a transparent surface such as the outer surface or a greenhouse [page 2, lines 1-3] for preventing burning of the plants. EP-067 further teaches that the coating comprises a divided pigment, such as, calcium carbonate [reads on “the pigment” of claim 35 and “pigment divider” in claim 39; page 2, lines 57-58;page 3] and a binder EP-067 teaches that the coating is removable using sodium hydroxide and complex shapers such as trisodium salt [reads on “a base” and “a complex former” in claims 29 and 41].

EP-067 does not teach the specific properties of the polymer. However, EP-067 teaches other copolymers based on carboxylic residues.

‘117 teaches that it is known to use an acrylic polymer (i.e., a polymer based on carboxylic acid residues) within the claimed weight-average molecular weight [10,000 to 500,000; col. 7, lines 45-46], the claimed acid value [65 mg/g; col. 7, line 44], the claimed polydispersity [4; col. 7, lines 47-48], and the claimed glass transition temperature [0°C or higher; col. 7, lines 46-47] in a removable protective coating [col. 1, lines 12-15; col. 8, lines 25-27].

‘117 teaches that the weight-average molecular weight, the acid value, polydispersity, and the glass transition temperature can be optimized [col. 53, Table 2-5 in Example 2-15; col.

55-56, Example 2-21; col. 56, Comparative Example 2-9; see also claims 5 and 6 in col. 60]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the following properties of the polymer: weight-average molecular weight, acid value, polydispersity, and the glass transition temperature, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

'117 further teaches that for an alkali soluble adhesive the polymer binder is combined with solvent wax, tackifier, and if 100 parts of a polymer is combined with 0-400 parts of solvent, 0-50 parts of wax, and 0-50 parts of tackifier [col. 7, lines 17-22], then the amount of a binder as set forth in the instant claims 34 and 36 is clearly within the claimed range.

Furthermore, '117 teaches the use of adhesion promoters [reads on claim 37; col. 5, lines 34-39] and of polycarboxylic acid thickener [reads on claim 40; col. 39, 48-49].

Regarding the recitation “removing the protective coating with a removing agent comprising a base and a complex former” in claims 29 and 41, this recitation is a statement of intended use (even though EP-067 teaches this limitation). The polymer is known and presumed to have the same properties of it being adhered to glass, since the prior art teaches it is capable of being performed. See MPEP 2114.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP-067 and '117 as applied to claim 29 above, and further in view of Wieczorek (U.S. Patent 4,409,266, hereinafter '266).

Claim 38: EP-067 and '117 teach the limitations of claim 29 above.

They do not explicitly teach silanes as adhesion promoters.

'266 teaches a shatterproof coating of glass surfaces by coating the surfaces with a coating composition. The glass surfaces to be coated before application of the coating composition with a physically drying priming lacquer containing a silane adhesion promoter and a catalyst which accelerates hardening of the coating composition [abstract].

All of the above references are concerned with a protective coating applied to surface with adhesion promoters. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the silane adhesion promoter of '266 in the coating of EP-067/'117 because '266 teaches that it is a suitable material for use as an adhesion promoter.

Claims 29-37 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 51127181, and in view of '117.

Claims 29-37 and 40-41: JP-181 teaches a light-selective transmitting film comprising polyalkyl methacrylate type copolymer films as the base material and a metal oxide film above it (i.e. the copolymer film is a coating on the metal oxide film; bridging paragraph of pages 4-5), films transmitting $\geq 30\%$ of light of 0.4 to 0.7 μ m in wavelength and reflecting $\geq 20\%$ of light of 2 to 10 μ m in wavelength. Copolymer films formed by copolymerizing 26 to 97 wt. % of alkyl methacrylates containing 1-4C alkyl, 3-74 wt.% of alkyl acrylates having 1-8C alkyl and 0-

40 wt.% of copolymerizing monomers (methacrylic acid, acrylonitrile, styrene, etc.) [abstract]
for use as a greenhouse film [last 2 sentences of page 8 and the first 6 lines of page 9].

JP-181 teaches the use of a copolymer film on a greenhouse in order to accelerate the
growth of plants.

JP-181 does not teach the specific properties of the polymer.

However, '117 teaches an alkali soluble film, comprising an acrylic polymer as a binder, which acrylic polymer is obtained by bulk polymerization and has a number average molecular weight of 1,000 to 1,000,000, a polydispersity of 5 or less, and a glass transition temperature of the binder of -80°C or higher [abstract]. The specific monomers named in the instant claim 29 are found '117's examples, such as Example 1-1 [cols. 43-44], Example 2-27 [col. 53], and others. As for the acid value, the broad teaching of '117 is that the acid value is higher than 65 mg/g [col. 7, line 44]. Specifically, example 2-21 shows the production of a polymer, which has a weight average molecular weight of 32,000, a polydispersity of 2.2, and an acid value of 160 mg/g [reads on claims 29-32]

As stated above, '117 teaches that the glass transition temperature is -80°C or higher. With respect to claims 33 and 41, '117 teaches that the glass transition temperature can be 0°C or higher [col. 7, lines 46-47] or 30°C or higher [col. 9, line 20].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the glass transition temperature, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

'117 further teaches that for an alkali soluble adhesive the polymer binder is combined with solvent wax, tackifier, and if 100 parts of a polymer is combined with 0-400 parts of solvent, 0-50 parts of wax, and 0-50 parts of tackifier [col. 7, lines 17-22], then the amount of a binder as set forth in the instant claims 34 and 36 is clearly within the claimed range.

'117 teaches the use of calcium carbonate as a pigment [reads on claim 35; col. 5, lines 35-40] as well as the use of adhesion promoters [reads on claim 37; col. 5, lines 34-39] and of a polycarboxylic acid thickener [reads on claim 40; col. 39, 48-49].

JP-181 and '117 disclose substantially identical polymer films, wherein JP-181 teaches the use of these polymers for coating the surface of a greenhouse and '117 teaches the specific characteristics as instantly claimed. Therefore, there is a clear motivation and suggestion in both references to use the polymer film of '117 as a coating to a greenhouse as taught by JP-181.

Regarding the recitation “removing the protective coating with a removing agent comprising a base and a complex former” in claims 29 and 41, this recitation is a statement of intended use (even though EP-067 teaches this limitation). The polymer is known and presumed to have the same properties of it being adhered to glass, since the prior art teaches it is capable of being performed. See MPEP 2114.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP-181 and '117 as applied to claim 29 above, and further in view of Wieczorek (U.S. Patent 4,409,266, hereinafter '266).

Claim 38: JP-181 and '117 teach the limitations of claim 29 above.

They do not explicitly teach silanes as adhesion promoters.

'266 teaches a shatterproof coating of glass surfaces by coating the surfaces with a coating composition. The glass surfaces to be coated before application of the coating composition with a physically drying priming lacquer containing a silane adhesion promoter and a catalyst which accelerates hardening of the coating composition [abstract].

All of the above references are concerned with a protective coating applied to surface with adhesion promoters. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the silane adhesion promoter of '266 in the coating of JP-181/'117 because '266 teaches that it is a suitable material for use as an adhesion promoter.

(10) Response to Argument

A. In response to appellant's argument regarding the definiteness of claims 29 and 41, the Examiner finds this persuasive. Thus, the previous 35 U.S.C. 112, second paragraph, rejection of claims 29 and 41 is withdrawn.

B. In response to appellant's statement that the combination of van Rossum in view Yoshida is improper, the Examiner does not find this persuasive. Van Rossum is relied upon for its teaching of a removable protective coating on a transparent surface, such as the outer surface of a greenhouse to prevent burning of the plants. Van Rossum did not teach the specific

properties of the polymer protective coating. Yoshida is relied upon for its teaching of the specific polymer used as a removable protective coating being superior in heat resistance. While Yoshida cites a broad range of properties, these ranges overlap what is cited in the instant application. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to keep the properties of the polymer within that range so that it would form a removable protective coating with superior heat resistance. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art," a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Furthermore, the burden is placed on the appellant's to establish unexpected results pertaining to the claimed limitations. Finally, no proof has been established that any of the combinations within the ranges cannot meet the claimed limitations.

In response to appellant's statement that Yoshida teaches that materials within the broad ranges have very different and mutually exclusive physical and chemical properties, thereby providing no guidance at all in the optimization process, the Examiner does not find this persuasive as there is no evidence that this is true. Furthermore, it is clear that some guidance exists because Yoshida teaches ranges that overlap what the appellant's are trying claim.

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

C. In response to appellant's statement that the combination of van Rossum, Yoshida and further in view of Wieczorrek is improper, the Examiner does not find this persuasive. Van Rossum is relied upon for its teaching of a removable protective coating (containing adhesion promoters) on greenhouse glass. Yoshida is relied upon for its teaching of the specific polymer used as a removable protective coating with a specific adhesion promoter. Wieczorrek is relied upon for teaching coating glass using a specific adhesion promoter. The combination of van Rossum and Yoshida is explained in detail above. It is prudent to look at Wieczorrek since it is in the same field of endeavor as van Rossum and Yoshida that being a protective coating applied to a surface with adhesion promoters. It would have been obvious to one of ordinary skill in the art to use the specific adhesion promoter of Wieczorrek in the modified coating of van Rossum because Wieczorrek teaches it is a suitable material for use as an adhesion promoter for glass.

D. In response to appellant's statement that the combination of Sato in view Yoshida is improper, the Examiner does not find this persuasive. Regarding the appellant's discussion of the metal oxide of Sato, the metal oxide is part of the transparent surface of the greenhouse and has a film directly contacting the transparent layer. Therefore, it is a transparent film on a

transparent surface of a greenhouse. Thus, the entire wall of the greenhouse will *not* be removed.

Sato teaches a film for high weather resistance; thus, it teaches the genus but not the specific properties of the polymer protective coating. However, Yoshida is relied upon for its teaching of the specific properties for successful use in agriculture. The polymer is known to be used successfully; thus, the expectation of providing protection is expected.

Sato is relied for its teaching of a copolymer film on a greenhouse in order to accelerate the growth of plants. Sato did not teach the specific properties of the polymer protective coating. Yoshida is relied upon for its teaching of the specific polymer used as a removable protective coating. While Yoshida cites a broad range of properties, these ranges overlap what is cited in the instant application. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to keep the properties of the polymer within that range so that it would form a removable protective coating. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). Furthermore, the burden is placed on the applicant's to establish unexpected results pertaining to the claimed limitations. Finally, no proof has been established that any of the combinations within the ranges cannot meet the claimed limitations.

In response to appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the

time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

E. In response to appellant's statement that the combination of Sato, Yoshida and further in view of Wieczorrek is improper, the Examiner does not find this persuasive. Sato is relied upon for its teaching of a copolymer film on a greenhouse in order to accelerate the growth of plants. Yoshida is relied upon for its teaching of the specific polymer used as a removable protective coating with a specific adhesion promoter. Wieczorrek is relied upon for teaching coating glass using a specific adhesion promoter. The combination of Sato and Yoshida is explained in detail above. It is prudent to look at Wieczorrek since it is in the same field of endeavor as Sato and Yoshida that being a protective coating applied to a surface with adhesion promoters. It would have been obvious to one of ordinary skill in the art to use the specific adhesion promoter of Wieczorrek in the modified coating of Sato because Wieczorrek teaches it is a suitable material for use as an adhesion promoter for glass.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/N. B./

Nicole Blan

Examiner, Art Unit 1792

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/Michael Cleveland/

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Supervisory Patent Examiner, Art Unit 1792

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